

AMENDMENT TO THE CLAIMS

A complete listing of the claims is as follows:

Claims 1-20. (*Canceled*)

Claim 21. (*Currently Amended*) A laminate according to claim ~~16~~ 73, wherein:

~~the core has a thickness e_2 and the two layers have a total thickness $e_3 + e_4$, a ratio between the thickness of the core and the total thickness of the two layers are being defined as follows:~~

$$e_2 / \frac{e_3 + e_4}{2} \leq 4.$$

Claim 22. (*Currently Amended*) A laminate according to claim ~~16~~ 73, wherein:

~~the core has a thickness e_2 and the two layers have a total thickness $e_3 + e_4$, a ratio between the thickness of the core and the total thickness of the two layers being defined as follows:~~

$$e_2 / \frac{e_3 + e_4}{2} \leq 3.5.$$

Claim 23. (*Canceled*)

Claim 24. (*Canceled*)

Claim 25. (*Currently Amended*) A laminate according to claim ~~24~~ 73, wherein:

the fibers of the core comprise a member selected from the group consisting of synthetic fibers, natural fibers, cellulose fibers, or a mixture of any of combination of synthetic, natural, and cellulose fibers;

the synthetic fibers comprise a member selected from the group consisting of polyamide fibers, polyolefine fibers, polyester fibers, and polyesterimide fibers;

the natural fibers comprise a member selected from the group consisting of silk fibers, cotton fibers, linen fibers, jute fibers, and hemp fibers.

Claims 26-28. (*Canceled*)

Claim 29. (*Currently Amended*) A laminate according to claim ~~23~~ 73, wherein:

the fibers of the core comprise fibers oriented within the composite material of the core.

Claim 30. (*Currently Amended*) A laminate according to claim ~~29~~ 25, wherein:

the fibers of the core comprise woven fibers.

Claim 31. (*Currently Amended*) A laminate according to claim ~~29~~ 25, wherein:

the fibers of the core comprise non-woven fibers.

Claim 32. (*Currently Amended*) A laminate according to claim ~~23~~ 25, wherein:

the fibers of the core comprise fibers randomly situated within the composite material of the core.

Claims 33-36. (*Canceled*)

Claim 37. (*Currently Amended*) A laminate according to claim ~~36~~ 73, wherein:

the fibers of said at least one of the two layers comprise fibers made of a material comprising a member selected from the group consisting of polyolefine, oriented and stretched high-density polyethylene, polyamide, VECTRAN®, and SPECTRA®.

Claim 38. (*Currently Amended*) A laminate according to claim ~~46~~ 73, wherein:

the fibers of said at least one of the two layers comprise metallic fibers or metallic micro-fibers.

Claim 39. (*Previously Presented*) A laminate according to claim 38, wherein:

the fibers of said at least one of said two layers comprise fibers made of a material comprising a member selected from the group consisting of aluminum, titanium, and boron.

Claim 40. (*Canceled*)

Claim 41. (*Currently Amended*) A laminate according to claim ~~40~~ 73, wherein:

the fibers of said core ~~at least one of said two layers~~ comprise fibers made of silk.

Claim 42. (*Currently Amended*) A laminate according to claim ~~46~~ 73, wherein:

the fibers of the core comprise micro-fibers having a characteristic of rupture stress CR of less than or equal to 1,500 Mpa.

Claims 43-50. (*Canceled*)

Claim 51. (*Currently Amended*) A laminate according to claim ~~46~~ 73, wherein:

the core comprises a plurality of superimposed plies of composite material.

Claim 52. (*Currently Amended*) A laminate according to claim ~~46~~ 73, wherein:

at least one of the two layers comprises a plurality of superimposed plies of composite material.

Claim 53. (*Previously Presented*) A laminate according to claim 51, wherein:

at least one of the two layers comprises a plurality of superimposed plies of composite material.

Claim 54. (*Currently Amended*) A laminate according to claim ~~46~~ 73, wherein:

at least one of the two layers is transparent so that the core is visible, the core comprising decorating elements.

Claim 55. (*Currently Amended*) A laminate according to claim ~~46~~ 73, wherein:

the laminate has a tensile strength R in a bending test Tf relative to a specimen test piece made of a carbon fiber composite having the same shape and rigidity as those of the test pieces tested, such that R is greater than or equal to 50 N/mm.

Claim 56. (*Canceled*)

Claim 57. (*Canceled*)

Claim 58. (*Withdrawn*) A method of manufacturing a laminate according to claim ~~46~~ 73, wherein:

the core comprises at least one ply;

each of the two layers ~~comprises~~ comprise at least one ply;

the core and at least the two layers are superimposed;

the plies of the core and each of the layers comprise plies of woven or non-woven micro-fibers, oriented or non-oriented micro-fibers, and fibers preimpregnated with resin or non-preimpregnated with resin.

Claims 59-71. (*Canceled*)

Claim 72. (*Currently Amended*) A laminate according to claim ~~68~~ 74, wherein:

the predetermine magnitude of the mechanical strength of the fibers of the core is defined as the following:

- a rupture force in longitudinal traction of less than or equal to 1,500 Mpa;
- ~~a modulus in longitudinal traction of less than or equal to 50,000 Mpa; and~~
- an elongation at rupture in longitudinal traction of equal to or greater than 1.0%.

Claim 73. (*New*) A laminate comprising:

a sandwich structure comprising:

- two layers of a composite material containing fibers;
- a core consisting essentially of a fiber-reinforced composite material, said core being positioned between the two layers;
- at least a portion of the fibers of the core having a mechanical strength significantly lower than a mechanical strength of at least a portion of the fibers of at least one of the two layers;
- the laminate having a total thickness e less than or equal to 3 mm;
- the core having a thickness e_2 and the two layers have a total thickness $e_3 + e_4$, a ratio between the thickness of the core and the total thickness of the two layers being defined as follows:

$$e_2 / \frac{e_3 + e_4}{2} \leq 5.$$

Claim 74. (New) A laminate comprising:

a sandwich structure having a total thickness no greater than 3 mm, said sandwich structure comprising:

a core consisting essentially of a composite, the composite comprising a polymer resin matrix reinforced with fibers, the fibers of the composite consisting essentially of fibers having a mechanical strength no greater than a predeterminate magnitude defined as a modulus M in longitudinal traction of less than or equal to 50,000 Mpa;

two fiber-reinforced composite layers, the core being positioned between the two layers, fibers of the two layers being different from the fibers of the core;

both of the two fiber-reinforced composite layers having a mechanical strength greater than the predeterminate magnitude of the mechanical strength of the fibers of said core;

the core having a thickness e_2 and the two layers have a total thickness $e_3 + e_4$, a ratio between the thickness of the core and the total thickness of the two layers being defined as follows:

$$e_2 / \frac{e_3 + e_4}{2} \leq 5.$$

Claim 75. (New) A laminate according to claim 74, wherein:

the fibers of the core comprise micro-fibers having a modulus M in longitudinal traction of less than or equal to 30,000 Mpa.

Claim 76. (*New*) A laminate according to claim 74, wherein:

the fibers of the core comprise micro-fibers having a modulus M in longitudinal traction of less than or equal to 20,000 Mpa.

Claim 77. (*New*) A laminate according to claim 74, wherein:

the ratio between the thickness of the core and the total thickness of the two layers is defined as follows:

$$e_2 / \frac{e_3 + e_4}{2} \leq 4.$$

Claim 78. (*New*) A laminate according to claim 74, wherein:

the ratio between the thickness of the core and the total thickness of the two layers is defined as follows:

$$e_2 / \frac{e_3 + e_4}{2} \leq 3.5.$$

Claim 79. (*New*) A laminate according to claim 74, wherein:

said core consists essentially of said composite.